



Standard Operating Procedure

Breath Alcohol Testing

**Idaho State Police
Forensic Services
August 1994
Revised 7/7/2009**

Glossary

Breath Test: A series of separate breath samples provided during a breath testing sequence.

Breath Testing Sequence: A sequence of events as determined by the Idaho State Police Forensic Services, which may be directed by either the instrument or the operator, but not both, and may consist of air blanks, calibration checks, internal standard checks, and breath samples.

Breath Testing Specialist (BTS): An operator who has completed an advanced training class taught by an employee of the Idaho State Police Forensic Services. BTS certification is valid for 26 calendar months and expires on the last day of the 26th month.

Idaho State Police Forensic Services (ISPFS): Formerly known as the Bureau of Forensic Services, the ISPFS is dedicated to providing forensic science services to the criminal justice system of Idaho. ISPFS employees are qualified to perform all duties of a BTS.

Calibration Check: A check of the accuracy of the breath-testing instrument utilizing a simulator and ethanol-based reference solution(s) provided by the ISPFS or approved vendor(s) and standardized by the ISPFS. Calibration checks should be reported to three decimal places.

Certificate of Analysis: A certificate stating that the reference solutions used for calibration checks have been tested and approved for use by the ISPFS

Certificate of Approval: A certificate stating that an individual breath alcohol-testing instrument has been evaluated by the ISPFS and found to be suitable for forensic alcohol testing. The certificate bears the signature of the Idaho State Police Forensic Services Manager/Major, and the effective date of the instrument approval.

Changeover Class: A training class for currently certified personnel during which they are taught theory, operation, and proper testing procedure for a new make or model of instrument being adopted by their agency. Breath Testing Specialists attend BTS training that qualifies them to perform BTS duties related to the instrument.

Operator Certification: The condition of having satisfied the training requirements for administering breath alcohol tests as established by the ISPFS. Operator certification is valid for 26 calendar months and expires on the last day of the 26th month.

Operator: An individual certified by the ISPFS as qualified by training to administer breath alcohol tests.

Operator Class: An ISPFS-approved training class for prospective or uncertified breath test operators. Currently certified Breath Testing Specialists may teach operator classes.

Recertification Class: A training class for currently certified personnel, completion of which results in uninterrupted continuation of their Operator or BTS status for an additional 26 months.

Reference Solution: An ethanol-based solution of known concentration provided by the ISPFS or approved vendor(s) and standardized by ISPFS, and used to conduct calibration checks.

Simulator Check (SIM CHK): Is a type of calibration check that is run with each individual breath test.

Waiting Period/Monitoring Period/Deprivation Period: Mandatory 15-minute period prior to administering a breath alcohol test, in which an officer monitors the test subject.

Breath Alcohol Standard Operating Procedure

List of Revisions

<u>SOP Section</u>	<u>Topic</u>	<u>Date of Revision</u>
2	Delete reference to ALS	June 1, 1995
2	0.02/0.20 solutions	June 1, 1995
3.2.1	Valid breath tests	October 23, 1995
2.1	Alco-Sensor calibration checks	May 1, 1996
2.2	Intoxilyzer 5000 Calibration Checks Effective June, 1996	May 1, 1996
2.1.2	0.003 agreement	June 1, 1996
2.1.2	Operators may run calibration checks	July 1, 1996
2.1.2	Re-run a solution within 24 hours	September 6, 1996
2.1	All 3 solutions run within a 24-hour period	September 6, 1996
2	All 3 solutions run within a 24-hour period	September 6, 1996
2.1.2	Re-running of a solution	September 26, 1996
2.1	All solutions run within a 48-hour period Reference to "three" removed	September 26, 1996 Oct. 8, 1996
2	All 3 solutions run within a 48-hour period	September 26, 1996
2	More than three calibration solutions	October 8, 1996
2	Solution values no longer called in to BFS	April 1, 1997
2.1	Alco-Sensor and Intoxilyzer 5000 calibration check	August 1, 1998
2.2	Calibration checks for the Intoxilyzer 5000	February 11, 1999
	Name change, all references made to the Bureau of Forensic Services were changed to Idaho State Police Forensic Services.	August 1999
1.6	Record Management	August 1, 1999
2	Deleted sections on relocating, repairing, recalibrating, and loaning of instruments from previous revision.	August 1, 1999
1.2, 2.1, 2.2	Alco-Sensor and Intoxilyzer 5000 calibration checks	August 1, 1999

3	Deleted sections on blood and urine samples for alcohol determination	August 1, 1999
1.6	Operator certification record management	January 29, 2001
1,2, and 3 2.1, 2.2	Reformat numbering Requirement for running 0.20 simulator solution	August 18, 2006
2.2.1.1.2.2	Changed 3-sample to “two print cards”.	November 27, 2006
2.2.1.1.2.2 2.1.2.1 and 2.2.4	Deleted “simulator port” and “two print cards”. Simulator temperature changed from “should” to “must”.	May 14, 2007 May 14, 2007
2.2.1.1.2.2	Clarification of 0.20 calibration checks.	September 18, 2007
1.2	Added the Lifeloc FC20	February 13, 2008
1.5	Deleted requirement that the new instrument utilize the same technology if the BTS is currently certified	February 13, 2008
2	Modified the accepted range for simulator solutions to +/- 10%, eliminating the +/- 0.01 provision. Added “Established target values may be different from those shown on the bottle label”	February 13, 2008
2.2	Added Lifeloc FC20 calibration checks Intoxilyzer 5000 calibration is now section 2.3	February 13, 2008
2.	Modified to specifically allow use of the 0.20 during subject testing	February 13, 2008
Sections 1, 2, 3	General reformat for clarification. Combined Alcosensor and Lifeloc sections. Specifically, changed calibration requirement using the 0.20 reference solution from four (4) checks to two (2).	December 1, 2008
2.1.4, 2.2.3, 2.2.4, 2.2.5 And 2.2.10	Clarification: a “calibration check” consists of a pair of samples in sequence and both samples must be within the acceptable range before proceeding with subject testing. A 0.20 solution should be replaced every 20-25 samples. Clarified the correct procedure for performing a calibration check.	January 14, 2009
2.1.3, 2.1.4.1, 2.1.9	Clarification: Added “ <i>before and after</i> ” to the 0.080 and 0.200 calibration checks, within 24 hours of a subject test. The official time and date of the calibration check is the time and date recorded on the printout, or in the absence of the printer, the time and date recorded in the log. <i>or the time and date recorded in the log, whichever corresponds to the calibration check referenced in section 2.1.3 or 2.1.4.1.</i>	July 7, 2009

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1. Instrument and Operator Certification

To ensure that minimum standards are met, individual breath testing instruments, operators, and breath testing specialists (BTS) must be approved and certified by the Idaho State Police Forensic Services (ISPFS). The ISPFS will establish and maintain a list of approved instruments by manufacturer brand or model designation for use in the state.

- 1.1 **Approval of Breath Testing Instruments.** In order to be approved and certified each instrument must meet the following criteria:
 - 1.1.1 The instrument shall analyze a reference sample or analytical test standard, the results of which must agree within +/- 10% of the target value or such limits set by ISPFS.
 - 1.1.2 The certification procedures shall be adequate and appropriate for the analyses of breath specimens for the determination of alcohol concentration for law enforcement.
 - 1.1.3 Any other tests deemed necessary to correctly and adequately evaluate the instrument to give accurate results in routine breath alcohol.
- 1.2 The ISPFS may, for cause, remove a specific instrument by serial number from evidential testing and suspend or withdraw certification thereof.
- 1.3 **Operators** become certified by completing a training class taught by an ISPFS certified Breath Testing Specialist (BTS). Certification is for 26 calendar months and expires the last day of the 26th month. Certification will allow the operator to perform all functions required to obtain a valid breath test. It is the responsibility of the individual operator to maintain their current certification; the ISPFS will not notify operators that their certification is about to expire.
 - 1.3.1 Recertification for another 26-month period is achieved by completing an ISPFS approved Operator class prior to the end of the 26th month.
 - 1.3.2 If the individual fails to satisfactorily complete the class (including the written and practical tests), or allows their certification status to expire, he/she must retake the operator class in order to become re-certified.
 - 1.3.3 Current Operator certification is voided, and the individual is not certified to run evidentiary breath tests on the instrument in question until the operator class is completed.
 - 1.3.3 There are no grace periods or provisions for extension of operator certification.
- 1.4 **Breath Testing Specialists (BTS)** are **Operators** who have completed an advanced training class and are ISPFS-certified to perform instrument maintenance, and provide both basic and recertification training for instrument operators.

- 1.4.1 To obtain **initial** BTS certification, an individual must be currently certified as an Operator of that particular instrument. BTS certification is then obtained by completing an approved BTS training class.
- 1.4.2 Certification is valid for 26 calendar months.
- 1.4.3 If BTS certification is allowed to expire, the individual reverts to certified Operator status for 12 calendar months for that instrument. He/she may no longer perform any BTS duties relating to that particular instrument.
- 1.4.4 BTS certification is renewable by attending an approved BTS training class. .
- 1.4.5 The Idaho State Police Forensic Services may revoke BTS certification for cause. Examples may include falsification of records, failure to perform required calibration checks, failure to successfully pass a BTS re-certification class and failure to meet standards in conducting operator training.
- 1.5 **Adoption of a new instrument** by an agency will require updating any BTS and Operators in that agency.
 - 1.5.1 A currently certified **BTS** may become a certified BTS for a new instrument by completing an instrumentation class.
 - 1.5.2 A currently certified **Operator** may certify on a new instrument by completing an ISPFS approved Operator Instrumentation Class for the new instrument.
 - 1.5.3 Individuals not currently certified as **Operators** must complete an Operator Class for each approved instrument.
- 1.6 **Record maintenance and management.** It is the responsibility of each individual agency to store calibration records, subject records, maintenance records, instrument logs, or any other records as pertaining to the evidentiary use of breath testing instruments and to maintain a current record of operator certification.
 - 1.6.1 It is the responsibility of the agency to see that the said records are stored and maintained a minimum of (3) years in accordance with IDAPA 11.03.01.
 - 1.6.2 The Idaho State Police Forensic Services will not be responsible for the storage of such records not generated by it.
 - 1.6.2.1 Records may be subject to periodic review by the Idaho State Police Forensic Services.

2. Calibration Checks of Breath Testing Instruments

Calibration checks aid the Breath Testing Specialist (BTS) and the Idaho State Police Forensic Services (ISPFS) in determining if a breath-testing instrument is functioning correctly. Calibration checks are performed using a reference sample or analytical standard of ethanol-water, wet-bath simulator solutions prepared and analyzed by the ISPFS or an approved vendor. The ISPFS analysis establishes the target value and acceptable range of the solutions used for the checks and includes them on the Certificate of Analysis. Note: The *ISP established target values may be different from those shown on the bottle label*.

2.1 Alco-Sensor and Lifeloc FC20 – Portable Breath Testing Instrument Calibration Checks

- 2.1.1 The Alco-Sensor and Lifeloc FC20 portable breath testing instrument calibration check is run using approximately **0.08** and/or **0.20** reference solutions provided by the Idaho State Police Forensic Services or approved vendor and following the procedure outlined in the Alco-Sensor and Lifeloc FC20 instrument manuals.
- 2.1.2 The calibration checks using the 0.08 and 0.20 reference solutions consist of two samples separated by air blanks.
- 2.1.3 A calibration check of the Alco-Sensor and Lifeloc FC20 instruments using a 0.08 reference solution must be performed within 24 hours, before or after a subject test to be approved for evidentiary use. Multiple breath tests may be covered by a single calibration check.
 - 2.1.3.1 A 0.08 reference solution should be replaced with fresh solution approximately every 20 - 25 checks or every month, whichever comes first.
- 2.1.4 A 0.20 reference solution should be run and results logged once per calendar month and replaced with fresh solution approximately every 20 - 25 checks.

NOTE: The 0.20 calibration check is run in support of excessive consumption: Idaho Code section 18-8004c.

- 2.1.4.1 The 0.20 reference solution check satisfies the requirement for a calibration check within 24 hours, before or after a subject test. The 0.20 reference solution should not be used routinely for this purpose.
- 2.1.5 Acceptable results for a 0.080 or 0.20 calibration check is a pair of samples in sequence that are both within +/- 10% of the reference solution target value. Target values and ranges of acceptable results are included in a certificate of analysis for each solution lot series, prepared by, and available from, the ISPFS.

NOTE: Due to external factors associated with changing a reference solution (examples include: ambient air in the sample chamber, temperature

fluctuation) the results of the **initial** calibration check may not be within the acceptable range, therefore the calibration check may be repeated until a pair of satisfactory results are obtained however, if results after a total of three runs for any solution (equivalent to six tests) are still unsatisfactory, contact the appropriate ISPFS Laboratory. The instrument should not be used for evidentiary testing until the problem is corrected and calibration check results are within the acceptable range.

- 2.1.6 Temperature of the simulator must be between **33.5°C** and **34.5°C** in order for the calibration check results to be valid.
- 2.1.7 Calibration check solutions should only be used prior to the expiration date on the label.
- 2.1.8 An agency may run additional calibration checks at their discretion.
- 2.1.9 The official time and date of the calibration check is the time and date recorded on the printout, or the time and date recorded in the log, whichever corresponds to the calibration check referenced in section 2.1.3 or 2.1.4.1.

2.2 Intoxilyzer 5000/EN Calibration Checks

Intoxilyzer 5000/EN instruments must have a calibration check with each subject test. If the calibration check is acceptable the instrument will be approved and the resulting breath samples will be deemed valid for evidentiary use.

- 2.2.1 Intoxilyzer 5000/EN calibration check is run using 0.08 and/or 0.20 reference solutions provided by the Idaho State Police Forensic Services or approved vendor and following the procedure outlined in the Intoxilyzer 5000/EN manual.
- 2.2.2 During each subject breath test using the Intoxilyzer 5000/EN, a 0.08 calibration check will be performed as directed by the instrument testing sequence and recorded as SIM CHK on the printout. If the SIM CHK is not within the acceptable range for the solution, the testing sequence will abort and no breath samples will be obtained.
- 2.2.3 A two sample calibration check using a **0.08 reference solution** should be ran and results logged each time a solution is replaced with fresh solution. A 0.08 reference solution should be replaced with fresh solution approximately every 100 samples or every month, whichever comes first.
- 2.2.4 A two sample calibration check using a **0.20 reference solution** should be run and results logged once per calendar month and replaced with fresh solution approximately every 20-25 samples.

NOTE: The 0.20 calibration check is run in support of excessive consumption; Idaho Code section 18-8004c.

- 2.2.5 Acceptable results for a 0.080 or 0.20 calibration check is a pair of samples in sequence that are both within +/- 10% of the reference solution target value. Target values and ranges of acceptable results are included in a certificate of analysis for each solution lot series, prepared by, and available from, the ISPFS.

NOTE: Due to external factors associated with changing a reference solution (examples include: ambient air in the sample chamber, temperature fluctuation) the results of the **initial** calibration check may not be within the acceptable range, therefore the calibration check may be repeated until a pair of satisfactory results are obtained however, if results after a total of three runs for any solution (equivalent to six tests) are still unsatisfactory, contact the appropriate ISPFS Laboratory. The instrument should not be used for evidentiary testing until the problem is corrected and calibration check results are within the acceptable range.

- 2.2.6 Calibration check information should be entered in the instrument log. The official time and date of the calibration check is the time and date recorded on the printout, or in the absence of a printer, the time and date recorded on the log.
- 2.2.7 Calibration check solutions should only be used prior to the expiration date as marked on the label.
- 2.2.8 Temperature of the simulator must be between **33.5°C** and **34.5°C** in order for the calibration check results to be valid.
- 2.2.9 An agency may run additional calibration checks at their discretion.
- 2.2.10 Recommended calibration check procedure: Run <Escape><Escape> <C> using the 0.20 reference solution, rinse and dry the simulator, refill with fresh 0.080 and run <Escape> <Escape> <C> before putting the instrument back in service.
- 2.2.11 The BTS must set the correct acceptable range limits and reference solution lot number in the instrument before proceeding with subject testing.

3. Subject Testing Procedure

Proper testing procedure by certified operators is necessary in order to provide accurate results that will be admissible in court. Instruments used in Idaho measure alcohol in the breath, not the blood, and report results as grams of alcohol in 210 liters of breath.

3.1 Prior to evidential breath alcohol testing, the subject must be **monitored for fifteen (15) minutes**.

Any material which absorbs/adsorbs or traps alcohol should be removed from the mouth prior to the start of the 15 minute waiting period. During the monitoring period the subject should not be allowed to smoke, drink, eat, or belch/burp.

- 3.1.2 The breath test must be administered by an operator currently certified in the use of the specific model of instrument used.
- 3.1.3 False teeth, partial plates, or bridges installed or prescribed by a dentist or physician does not need to be removed to obtain a valid test.
- 3.1.4 The operator may elect a blood test in place of the breath alcohol test if there is a failure to complete the fifteen minute monitoring period successfully.
- 3.1.5 During the monitoring period, the operator must be alert for any event that might influence the accuracy of the breath test.
 - 3.1.5.1 The operator must be aware of the possible presence of mouth alcohol as indicated by the testing instrument. If mouth alcohol is suspected or indicated, the operator should begin another 15-minute waiting period before repeating the testing sequence.
 - 3.1.5.2 If, during the 15-minute waiting period, the subject vomits or is otherwise suspected of regurgitating material from the stomach, the 15-minute waiting period must begin again.

3.2 A breath alcohol test includes two (2) valid breath samples taken during the testing sequence and separated by air blanks.

NOTE: A deficient or insufficient sample does not automatically invalidate a test.

- 3.2.1 If the subject fails or refuses to provide a second or third adequate sample as requested by the operator, the single test result may be considered **valid**.
 - 3.2.2.1 The operator may repeat the testing sequence as required by circumstances.
 - 3.2.2.2 The operator should use a **new mouthpiece** for each series of tests.
- 3.2.3 A **third breath sample** is required if the first two results differ by more than **0.02**.

- 3.2.3.1 Unless mouth alcohol is indicated or suspected, it is **not** necessary to repeat the 15-minute waiting period to obtain a third breath sample.
- 3.2.4 The operator should log test results and retain printouts for possible use in court. If there is no printout, the log page becomes the legal record of the test results.
- 3.2.5 If a subject fails or refuses to provide a second or third sample as requested by the operator, the results obtained are still considered valid by the ISPFS, **provided** the failure to supply the requested samples was the fault of the subject and not the operator.
- 3.2.6 If the second or third samples are lacking due to instrument failure, the operator should attempt to utilize another instrument or have blood drawn.